



news

Business **RECYCLING** Assistance Program

Waste Management Information for South Carolina Businesses

Winter 2003

Did You Know?

The "Afterlife" of Electronics

- The S.C. Recycling Market Development Advisory Council (RMDAC) estimates that South Carolina residents annually generate nearly 1.5 million obsolete, unwanted and broken electronic products including computers and televisions. These electronics are commonly referred to as E-Waste.
- Many electronics contain toxic materials such as mercury, chromium and lead. These materials can pose serious threats to both public health and the environment if not handled properly.
- Cathode ray tubes (CRTs) found in computer monitors contain about four to seven pounds of lead.
- According to the U.S. Environmental Protection Agency, 24 percent of the lead found in municipal solid waste comes from CRTs.

For more information on managing E-Waste for your business, contact Karen Owens, B-RAP project manager, at (803) 737-0239.

Growing E-Waste stream provides difficult challenges for recycling

Is there a supply closet at your business filled with broken or outdated computers? Or maybe you have a room or two loaded with used electronics such as telephones, printers, maybe even an old television set that no longer works. Ever been in a building where old CPUs and cathode ray tubes (CRTs) lined the hallways waiting to move to their "afterlife?" According to the U.S. Environmental Protection Agency, companies that send potentially hazardous materials such as fluorescent bulbs and old computers to the municipal solid waste landfill for disposal are in violation of the universal waste regulations. To be in compliance, companies must file manifests for these materials and dispose them at permitted hazardous waste disposal facilities. There is, however, a less expensive alternative – recycling.

Electronics recycling in South Carolina is still in its infancy. But the reintroduction of legislation, proposed by the S.C. Recycling Market Development Advisory Council, supports the use of an environmental fee to develop an electronics recycling infrastructure. This infrastructure has the potential to provide a valuable alternative to throwing old computers and electronic equipment – also known as E-Waste – into the state's landfills. Rapid advances in technology have improved how many businesses operate, but they've also contributed to a fast-growing waste stream that poses a serious dilemma for many South Carolina communities, residents and businesses.

Similar to existing programs for tires and motor oil, the new bill would place an advance disposal fee on the purchase of televisions and computer monitors. The money collected would go into an electronics recycling trust fund that would provide grant monies to local governments, communities and businesses to develop a collection and processing infrastructure to properly handle this potentially hazardous material.

Given the effectiveness of South Carolina's programs for waste tires and used oil, using an environmental fee to develop a recycling infrastructure for all electronics should be equally successful.



E-Waste Alternatives

- ▲ Some computers can be refurbished and resold to small businesses or organizations that may not require the latest technological advances. In some cases, businesses may consider donating equipment that can still be used to schools or non-profit organizations.
- ▲ Recycling E-Waste is another viable option. There are many parts of computers and electronic equipment that can be recycled, such as glass, aluminum, copper, steel and plastic. There are a growing number of companies in S.C. that are starting to process and recycle used electronics.
- ▲ Developing a better E-Waste recycling infrastructure will help lower the costs for everyone, small businesses included. As a business owner, you may want to let your community leaders and customers know that recycling electronics is a better alternative than disposing them.

S.C. manufacturers recognized for pollution prevention efforts

Four South Carolina manufacturers were awarded the 2002 Governor's Pollution Prevention Awards in recognition of their efforts to protect the state's environment through innovative pollution prevention programs. The awards ceremony was held on November 7, 2002, as part of the 11th annual S.C. Environmental Symposium in Myrtle Beach.

Dei-Tec Corporation of West Columbia was recognized as the small business or industrial facility winner for its development of the Dei-Max[®] renewable oil filter. Having automobiles use a renewable filter provides opportunities to recycle 100 percent of the used oil remaining in the filter as well as eliminates the need for disposal of used filters. Dei-Tec uses an ultrasonic cleaning process to reclaim residual oil. The filter can be reused again and again – up to 14 years.

Rockwell Automation Gear Plant in Greenville was the medium-sized business or industrial facility winner in recognition of its efforts to lower volatile organic compound (VOC) emissions from its manufacturing process by 93.7 percent since 1995. Rockwell also has implemented significant waste minimization programs and successfully reduced hazardous waste generation by 97 percent.

Wellman, Inc. – Palmetto Plant of Florence was the large business or industrial facility winner for its efforts to reduce hazardous air pollutants (HAPs) by consuming its hazardous degradation product off-gases in the plant's boilers and heaters. Since 1995, Wellman has successfully reduced its HAPs by 66 percent while production output at the facility has grown by 31 percent.

Duncan-based **Draexlmaier Automotive of America** received honorable mention recognition as a medium-sized business or industrial facility for reducing its solid waste disposal by 80 percent. As a result of its aggressive waste reduction and recycling activities, Draexlmaier saved nearly \$10,000 from the previous year.

CRA workshop geared toward business/industry

Businesses and industry are encouraged to learn more about waste reduction and recycling opportunities at the Carolina Recycling Association's annual conference March 18-21 at the Hyatt Regency in Greenville, S.C.

A three-hour workshop, "Commercial and Industrial Waste Reduction: The Basics and Beyond," is set for March 19. The workshop, which begins at 8:30 a.m., will provide participants with the following information:

- Steps on implementing a waste reduction and recycling program;
- Resources available for locating markets for recovered materials;
- Tips on marketing industrial by-products to other manufacturers;
- Overview of environmentally preferable purchasing and its benefits; and
- Case studies of businesses that experience significant cost savings as a result of implementing active waste reduction and recycling programs.

Additional sessions of interest to businesses may include discussions on the growing importance of environmental management systems as well as updates on electronics recycling and universal waste regulations, green building techniques and an environmental benefits calculator.

The cost to attend Wednesday's commercial and industrial waste reduction workshop is \$25 and includes an opportunity to visit the Exhibition Hall. To register by phone, call **(919) 545-9050**.

For more information, visit the CRA's Web site at **www.cra-recycle.org**.

IEP finds new homes for business waste

What do four truckloads of hardwood racks, 1,500 gallons of methanol, hundreds of wooden reels and seven tons per month of rubber shavings have in common?

They all are by-products of industrial activity that were headed to landfills, but found a new life, thanks to the University of South Carolina's School of the Environment Industrial Ecology Program (IEP.) Working with the Business Recycling Assistance Program, IEP staff help South Carolina companies save money on waste management as well as valuable landfill space.

"One manufacturing company's waste is another one's treasure," said Sylvie Kenig-Dessau, a research analyst for IEP. "But companies do not always have the time and resources to research uses for the contents of their dumpster, much less to contact potential takers."

The program is funded by a federal grant and allows specialized staff, at no cost to the company, to gather information about the by-product and research potential uses and users for the material. The process of locating companies in the region that can potentially use the material often includes sending samples and information, answering questions, confirming interest, and finally putting them in touch with the generator.

"Our goal is to generate savings, and if possible, a revenue stream for the generator," Kenig-Dessau said. "We usually work with materials for which there is no obvious market, so we do not compete with material brokers."

A recent case involved finding an outlet for rubber shavings. The company manufactures and refurbishes rubber-covered rolls for the pulp and paper, printing and metal processing industries. Refurbishing the rolls involves "shaving" the rubber surface. The resulting material is a

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Case Study: Lexington Medical Center

Demonstrating a commitment to preserving the health of the planet as well as its community, Lexington Medical Center's (LMC) comprehensive waste reduction and recycling program not only saves money but also valuable landfill space.

LMC's program was established in 1993. "The support of top management is a critical part of our program's success," said Dale Thompson, director of Environmental Services for the hospital. "Without Ken Shull, Mike Biediger and Roy Freck's support and vision, we couldn't have transformed people's behaviors and attitudes to accept recycling."

A task force, comprised of representatives from environmental services, facility management, nursing and ancillary departments, was asked to do a waste audit to determine what materials could be recycled. Working with Paper Stock Dealers in Columbia, they implemented a program to collect various grades of office paper, cardboard boxes, glass, aluminum and steel cans. They held their kick-off on Earth Day and ended up recycling 162 tons of materials in 1993.

According to Thompson, the program has grown and changed to address new needs and lagging markets. Today, paper is no longer separated by color and is mixed with newspaper and other paper products. It is placed in secured 96-gallon containers to fulfill patient privacy requirements, and LMC has worked with Paper Stock to ensure that these materials are kept confidential. Materials added to LMC's program over the years include batteries, printer cartridges, pallets, fluorescent bulbs and kitchen grease. The task force also looked into reducing waste and reusing materials whenever possible. Examples include switching from cardboard containers used to dispose medical waste to buying reusable plastic bins; customizing surgical kits to reduce unused instruments being thrown away; and ensuring that all packaging is either reusable or recyclable. Many of the hospital's supplies now come in cardboard containers that can be converted to file boxes.

Education was another important part of the program's success. "In the beginning we had our task force go into each department and train employees about how they could recycle and why it was important," Thompson said. They also used posters, promoted recycling efforts at its annual Health and Safety Fair and used new employee orientations as another educational tool. "We used incentives to increase participation in the beginning," Thompson said. "Now it's ingrained into our culture and is an important part of what we do."

It's no small feat when you consider the program not only includes the hospital's main campus, a 300-bed facility, but also incorporates 29 physician practices and seven

community medical centers. With nearly 4,000 employees and hundreds of patients coming in and out of their centers daily, it's a significant accomplishment to reduce the number of trash pulls from three times a week to just two. And in just the first nine months of 2002, LMC had collected nearly 172 tons of paper and cardboard for recycling, generating more than \$2,000 for its employees' emergency fund. But Thompson adds the real savings come from not spending \$9,100 in disposal fees and, of course, conserving landfill space. The task force has also provided input on how a planned expansion at the hospital will incorporate more room for storing recyclables and two new balers as well as finding a way to continue to provide a community recycling drop-off that had to be suspended as construction began to build the new addition.

In 2002, Lexington Medical Center's recycling program saved the hospital more than \$9,000 in disposal fees.

During the past nine years, LMC has made a positive impact on the environment through its concerted waste reduction and recycling activities. And it has generated almost \$48,000 for the emergency fund. It's just another good example of how taking care of the planet does help make one's community a better place.

New energy conservation fact sheet available

Learn how your business can reduce its overall energy costs with B-RAP's new Energy Conservation Fact Sheet. Tips include upgrading to energy efficient equipment, conducting regular equipment maintenance as well as using new lighting and heating/air conditioning technologies. Other tips include changing energy wasting habits like leaving lights, computers and other equipment on and adjusting thermostat settings. To obtain copies, visit the Web site at www.scdhec.net/brap and go the Services page for links to all of B-RAP's fact sheets. Or call 1-800-768-7348 to obtain copies by mail.

About this newsletter...

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"ribbon" of rubber several yards long. Most of them are black, but some are blue, white, brown and yellow. The rolls are not made of the same type of rubber, so the waste material is a mix of five or six different types of rubber.

Although the technology for recycling rubber tires now is widespread, this material is different from the kind used by tire recyclers. IEP staff contacted several pavers and eight manufacturers that use rubber as a feedstock, manufacturing products such as rubber flooring, stall mats, playground and sport surfacing and sent samples to three of them that had expressed interest. One company's verbal interest became a written proposal and the first shipment of rubber was sent to Ohio to be processed in December.

Companies interested in finding potential markets for industrial by-products may contact Kenig-Dessau at **(803) 777-4553** or call B-RAP's recycling hot line at **1-800-768-7348**.

Is watching your **WASTE** one of your company's New Year's resolutions?

It's that time of year when many of us are making New Year's resolutions to improve ourselves in the coming year. Is your company looking for ways to improve, particularly in light of tough economic times? Have you thought about your company's solid waste disposal costs? Would you like to reduce the amount of solid waste you generate and protect the environment while benefiting your bottom line? If so, WasteWise may be right for you.

WasteWise is a free, voluntary program that was established in 1994 by the U.S. Environmental Protection Agency (U.S. EPA). WasteWise is a flexible program that allows partners to set their own solid waste reduction goals in three areas – waste prevention, recycling and buying or manufacturing recycled-content products – all of which can save money.

The program provides guidance and recognition to the nearly 1,300 participating organizations working to find practical methods to reduce municipal solid waste and improve financial performance. Any organization may join the program. As a WasteWise partner, your company can save thousands of dollars by reducing, reusing and recycling solid waste.

The S.C. Department of Health and Environmental Control's (DHEC) Office of Solid Waste Reduction and Recycling (Office) serves as the contact for WasteWise in South Carolina. For more information on WasteWise or to become a WasteWise partner, contact the Office at **1-800-768-7348**. For additional information about WasteWise, visit the U.S. EPA's Web site, www.epa.gov/wastewise.

RETURN SERVICE REQUESTED

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